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IMPACT OF IMPORTED CHINESE FURNITURE ON THE LOCAL FURNITURE SECTOR IN ARUSHA CITY, TANZANIA: FOCUSING ON THE STRATEGIES OF FURNITURE-MAKERS FOR USING INDIGENOUS TIMBER SPECIES

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ABSTRACT The aim of this paper is to elucidate the strategies used by Tanzanian furniture-makers to deal with price competition from Chinese imported furniture by examining the changes in the local use of timber, which is becoming scarce due to destructive harvesting. Chinese furniture flowing into Tanzania is not only of a fashionable design but it is also cheap because it is constructed from low-quality timber and alternative materials. Small-scale Tanzanian furniture-makers operate their business based on a face-visible relationship with customers who expect a certain quality from the craftsmen; therefore, it is often difficult for the furniture-makers to reduce costs by changing from high-quality hardwood to cheap softwood or alternative materials. Thus, maintaining a certain degree of quality by using hardwood while imitating the fashionable designs of Chinese furniture is an important way Tanzanian furniture-makers remain competitive with Chinese products. However, for these reasons, Tanzanian furniture-makers continue to use scarce hardwood, which indirectly promotes the influx of cheap, low-quality Chinese furniture.

Key Words: Furniture industry; Indigenous wood; Chinese import; Arusha; Tanzania.

INTRODUCTION

The promotion of micro- and small-scale enterprises that utilize local resources is an important issue for many African countries such as Tanzania because these enterprises are important in terms of employment creation, income generation, and poverty alleviation, and as a base for industrial development. Although numerous studies have addressed this issue from different perspectives (cf. Mashenane & Rumanyika, 2014), recently, how Chinese commodities are placing constraints on the promotion of micro- and small-scale enterprises in Africa is increasing in importance. From the beginning of this century, the rapid inflow of Chinese commodities has had multiple, fundamental impacts on the socio-economic transformation of many African countries, including Tanzania, and has opened a new field of investigation in African area studies.

Micro- and small-scale industries that utilize forest products, such as the furniture and building material industries, are facing drastic penetration by Chinese commodities. Murphy (2006) examined the design, production, and marketing activities of furniture makers in Mwanza city in Tanzania and assessed the degree to which innovative and creative competencies and capabilities are emerging within this industry through the consciousness of competition with imported furniture, although he did not examine with the impact of imported Chinese furniture directly. His study raised questions about whether structural adjustment policies are contributing to the development of viable, globally oriented, and indigenously owned manufacturing firms in Africa by demonstrating how liberalization has, in effect, selected for less-creative, smaller-scale, and largely informal manufacturers while discouraging the development of more innovative, larger-scale, more formal firms. In his latest paper (Murphy, 2013), he reconsidered this issue by examining the substantial effect information and communication technology (ICT) has had on the micro- and small-scale furniture sector in Tanzania. He even argued, albeit indirectly, that the changes brought through the development of ICT has affected competition with Chinese imports.

In his master's thesis submitted to the business administration of Mzumbe University, Chanjarika (2013) directly examined the impact of Chinese furniture on the Tanzanian furniture industry. He collected data through interviews with a total of 150 buyers and sellers of furniture in Ilala and Temeke districts of Dar es Salaam city, and he found that most urban dwellers preferred imported furniture over local products because of their low price and variety of designs, although the respondents did state that the quality of the imported furniture was lower in terms of durability than the local furniture. Chanjarika insisted that the high price of local products is a result of the high cost of raw materials, poor power supply, poor technology, poor infrastructure, and unfavorable taxes and levies, as well as other problems that lead to a low preference for local furniture such as less promotion and advertising, unfashionable designs, and long lead times. Although he did not examine how the local furniture-makers are dealing with the influx of furniture from China, he did discuss the problems of the local furniture industry by clarifying why customers prefer imported Chinese furniture over local furniture.

The influence of Chinese furniture on the development of the micro- and small-scale furniture industry in Africa can be examined in combination with the coping strategies of local furniture-makers, who are affected by the sustainable use of local forest resources. This viewpoint is important when discussing the performance of the furniture sector, which uses mostly indigenous species of hardwood, including endangered species, compared with discussing the performance of the building sector, which mainly uses softwood.

Because of driving factors such as population growth, development of infrastructure, and competition over resources and agricultural land, forest and woodland in Tanzania is being lost at an increasingly rapid rate (Hosonuma et al., 2012). While there are several studies examining sustainable utilization and the problem in the distribution of forest resources such as illegal extraction of indigenous hardwood (cf. Blomely & Ramadhani, 2006; Schaafsma et al., 2014; Wall & Wells, 2000; Wells & Wall, 2003, 2005), these previous studies do not shed any light on how the scarcity of certain indigenous hardwoods affects the business strategies of small-scale industries that use these forest resources, including furniture-makers. The availability and price of hardwood are important factors to consider when examining the strategies of furniture-makers to cope with high price competition from imported Chinese furniture.

In this study, I examined the strategies of Tanzanian furniture-makers coping with price competition from imported Chinese furniture by examining the change in the use of timber, which is becoming scarce due to destructive harvesting. In this paper, I examine the dilemma faced by the Tanzanian furniture industry in dealing with the situation created by imported Chinese furniture.

RESEARCH OBJECTIVES AND METHODOLOGY

Arusha is the third largest city in Tanzania with a population of 416,442 (National Bureau of Statistics, 2012: 26). The city is a base for safari tours to national parks such as Arusha National Park, Serengeti, and Ngorongoro, and therefore it attracts many foreign tourists. Owing to the rich natural resources in the mountain areas (such as those on Mt. Meru and Mt. Kilimanjaro), the furniture industry in the area has been rapidly growing with the increase in demand for furniture not only for residential housing but also from the hotel and construction industries. Arusha Technical College and Vocational Training and Service Centre are located in Arusha region (Muto et al., 2011: 6). However, in Arusha, certain indigenous species of trees are becoming scare due to destructive deforestation and the price for timber from those trees is increasing. This phenomenon isn’t limited to Arusha; for example, Schaafsma et al. revealed that the Eastern Arc Mountains area of Tanzania, one of the most biodiversity-rich forests in the world, is under severe pressure from forest conversion and degradation due to extraction for firewood, charcoal, and timber, and this area has lost around 70% of its natural forest, which poses a threat to many species (Schaafsma et al., 2014: 156).

The data used in the present study were collected through fieldwork conducted in Arusha city from Sep. 2014 to Feb. 2017 in which I interviewed 46 timber dealers, 28 furniture-makers, and four import furniture shop owners. The informants’ location was categorized into five zones with reference to Muto et al. (2011), as shown in Fig. 1. According to Muto et al. (2011), during their research period there were 235 furniture-maker workshops in these five zones and there were specific places within each zone where several workshops were located. They also noted that the yards of timber dealers were located near the workshops of furniture-makers. I planned to interview timber dealers and furniture-makers in similar numbers in these five zones, and I also conducted a survey in Morombo, an area on the outskirts of Arusha city where a lot of timber shops are located due to a boom in construction. Informants from each zone were gathered by means of snowball sampling where I walked around each zone and asked timber dealers who participated in the research to introduce other dealers to me. I hired a furniture-maker as a research assistant who operated a business located in zone A, and I walked around with him to search for informants in the five zones, again using a snowball sampling approach. I also conducted an observational study in the furniture workshop of the research assistant. The average time for each interview was about two hours per person, but sometimes I stayed in a furniture-makers’ workshop for a whole working day.

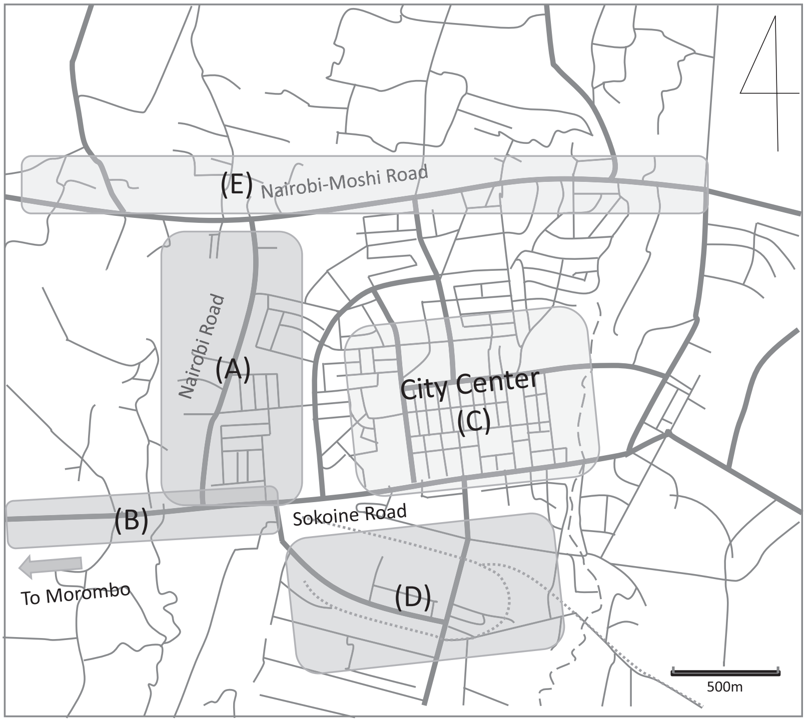

Fig. 1. Map of Arusha city

AVAILABILITY AND PRICE OF TIMBER IN ARUSHA CITY

Before discussing the impact of Chinese commodities on the furniture industry in Arusha city, the availability and price of each species of timber will be explained. I interviewed timber dealers about the kinds of timber they sell, the selling price of the timber, the purchasing area, and the sales destinations of each kind of timber, and I also asked questions about their business strategies.

Table 1 is a list of the timber dealers I interviewed. Table 2 shows the average retail price, harvesting age, and purchasing area of each timber sold in retail shops during the research period (2014–2016). There are three types of timber dealers. The first type are the brokers who go to the production area themselves to purchase timber, which they then supply to dealers who have timber yards in Arusha city. The second (type A) and third types (type B) of dealers are those who have a timber yard in Arusha city and sell timber to customers, including furniture-makers and carpenters, from their own yard (Photo 1 & 2). However, type A timber yard dealers go to the production areas or distribution sites themselves to purchase timber and because they deal with a relatively large amount of timber they sometimes sell the timber to other small-scale timber yard dealers (type B). Type B timber yard dealers do not have large-scale capital and purchase timber from brokers or type A timber yard dealers.

Table 1. List of informants (timber dealers)

No.	Type of business	Location	*Pine*	*Cypress*	*Caliputers*	Other species
1	Broker	no specific place	○	○	○	*Mtiki*
2	Broker	no specific place	○			*Mtiki*
3	Broker	no specific place	○	○		
4	Broker	no specific place	○	○		
5	Broker	no specific place				Many kinds of Indegineous species (Arusha, Kilimanjaro, Tanga)
6	Timber yard dealer (type A)	A	○	○		*Mruka*, *Msesewe*
7	Timber yard dealer (type A)	A	○	○		
8	Timber yard dealer (type A)	A	○	○	○	*Mninga*, *Mkola*, *Grevillea*
9	Timber yard dealer (type A)	A	○	○	○	*Mninga*, *Mkola*, *Mringaringa*, *Kemfa*, *Loliondo*
10	Timber yard dealer (type A)	A	○			*Mringaringa*, *Mjakaranda*, *Kemfa*, *Mringaringa*, *Parachichi*
11	Timber yard dealer (type A)	A	○		○	*Mkola*, *Mninga*, *Kemfa*
12	Timber yard dealer (type A)	A	○			
13	Timber yard dealer (type A)	B	○	○		
14	Timber yard dealer (type A)	B	○	○	○	Many kinds of species
15	Timber yard dealer (type A)	B	○			
16	Timber yard dealer (type A)	C			○	
17	Timber yard dealer (type A)	C	○			
18	Timber yard dealer (type A)	C	○	○		*Mringaringa*, *Msesewe*, *Mjakaranda*, *Mgunga*, *Mpilipili*
19	Timber yard dealer (type A)	C	○	○		*Loliondo* (reuse)
20	Timber yard dealer (type A)	C	○			
21	Timber yard dealer (type A)	D	○	○	○	
22	Timber yard dealer (type A)	D		○	○	
23	Timber yard dealer (type A)	D				Many kinds of species
24	Timber yard dealer (type A)	D				*Mninga*, *Msesewe*, *Mvule*
25	Timber yard dealer (type A)	D	○	○		

Table 1. (continued)

No.	Type of business	Location	*Pine*	*Cypress*	*Caliputers*	Other species
26	Timber yard dealer (type A)	D	○	○		
27	Timber yard dealer (type A)	D	○	○		
28	Timber yard dealer (type A)	E				Many kinds of species
29	Timber yard dealer (type A)	E	○	○		
30	Timber yard dealer (type A)	E	○			
31	Timber yard dealer (type A)	E	○			
32	Timber yard dealer (type A)	Morombo	○			
33	Timber yard dealer (type A)	Morombo	○	○		
34	Timber yard dealer (type A)	Morombo	○	○	○	
35	Timber yard dealer (type A)	Morombo	○	○		
36	Timber yard dealer (type A)	Morombo	○			
37	Timber yard dealer (type A)	Morombo	○	○		
38	Timber yard dealer (type A)	Morombo	○	○		
39	Timber yard dealer (type B)	A	○	○		*Grevillea*
40	Timber yard dealer (type B)	B	○	○		
41	Timber yard dealer (type B)	B	○	○		
42	Timber yard dealer (type B)	C	○			
43	Timber yard dealer (type B)	C			○	Many kinds of Indigeneous species
44	Timber yard dealer (type B)	E			○	*Mninga*, *Loliondo*
45	Timber yard dealer (type B)	Morombo	○			
46	Timber yard dealer (type B)	Morombo			○	Many kinds of Indigeneous species

Source) Author's fieldwork.

Table 2. The retail price and purchasing area of timbers

Local name	Scientific name	Harvesting age	Purchasing area	Size	Price (TZS)
Pine	*Pinus patula*	14～	Iringa (Mafinga), Arusha (Mt. Meru), Kirimanjaro (West Kilimanjaro)	2 in × 6 in × 1 m	4,800–5,000
				2 in × 4 in × 1 m	2,800
				2 in × 2 in × 1 m	1,100
				1 in × 8 in × 1 m	3,000
				2 in × 3 in × 1 m	1,800
Cypress	*Cupressus lusitanica*	10～ (pole) 20～ (timber)	Iringa (Mafinga), Arusha (Mt. Meru), Kilimanjaro, Tanga (Lushoto)	2 in × 6 in × 1 m	7,000
				1 in × 10 in × 1 m	4,500
				2 in × 4 in × 1 m	3,500
				2 in × 3 in × 1 m	2,300
Wite Calipters	*Eucalyptus*	40～	Iringa (Mafinga), Tanga (Lushoto), Arusha (Mt. Meru), Songea	2 in × 6 in × 1 ft	1,700
				2 in × 6 in × 1 m	5,000
Red Calipters	*Eucalyptus*	40～	Iringa (Mafinga), Tanga (Lushoto)	2 in × 6 in × 7 ft	12,600
				1 in × 10 in × 1 ft	1,500
Mninga	*Pterocarpus angolensis*	100?	Tabora, Singida	2 in × 6 in × 8 ft	35,000–40,000
Mkola	*Afzelia quanzensis*	40～	Tabora, Mbeya,Tanga	2 in × 6 in × 8 ft	40,000
Mpilipili	*Warburgia stuhlmanii*	50～	Arusha, Kilimanjaro	2 in × 6 in × 7 ft	35,000
Msesewe	*Rapanea rhododendroides*	20～	Arusha, Kilimanjaro	2 in × 6 in × 7 ft	10,500
				1 in × 10 in × 1 ft	1,300
Mruka	*Albizia schimperana*	40～	Kilimanjaro (Kibosho), Arusha	2 in × 6 in × 8 ft	30,000–40,000
Mpingo	*Palbergia melanoxylon*	100?	Reuse (not available)	negotiation	
Mvuli	*Milicia excelsa*	60～	Tanga, Dodoma, Tabora, Morogoro, Iringa	2 in × 6 in × 1 ft	1,700
Mringaringa	*Cordia africana*	40～	Arusha, Kilimanjaro	2 in × 6 in × 1 ft	1,500
				1 in × 10 in × 1 ft	1,500
Kamfa	*Octoea usambarensis*	40～	Kilimajaro, Tanga (Usambara)	2 in × 6 in × 1 ft	3,000
Loliondo	*Olea europaea* subsp. *africana*	40～	Ngorongoro, Arusha (Mt. Meru)	4 in × 4 in × 7 ft	20,000
Loliondo chuma	*Olea europaea* subsp. *africana*	100～	Reuse (not available)	negotiation	
Marile	unknown	unknown	Arusha (Arumeru)	unknown	
Mtiki	*Tectona grandis*	7 or 10～	Morogoro (Uruguru)	4 in × 4 in × 8 ft	35,000
Mtondoro	*Khaya anthotheca*	unknown	Tanga	4 in × 4 in × 7 ft	20,000
Grevillea	*Grevillea robusta*	20～	Arusha	2 in × 4 in × 1 ft	1,700
Kichuri	unknown	20～	unknown	2 in × 4 in (1 piece)	10,500
Mkangasi	*Khaya anthotheca*	20～	Kilimanjaro, Arusha, Morogoro	unknown	
Mparachichi	*Persea americana*	20～	Arusha, Tanga	2 in × 6 in × 1 ft	1,400
Mjakaranda	*Jacaranda mimosifolia*	20～	Arusha, Kilimanjaro	1 in × 10 in × 1 ft	2,500
Mvule	*Milicia excelsa*	unknown	Reuse (not available)	negotiation	

Source) Author's fieldwork.
Note) 1) I tried to identify the scientific name of each local name by using Ministry of Natural Resources & Tourism (2010) and Hines and Eckman (1993).
2) Purchasing area isn't mean the production area. Some timber wholesalers in Arusha bought the timber from the dealers at transit points of distribution.

As shown in Table 1, most of the timber dealers deal with *Pine* (*Pinus patula*) and *Cypress* (*Cupressus lusitanica*) as their main products. The price of each species of timber differs greatly, but softwood is generally cheaper than hardwood. These softwoods are purchased from production forest reserves and villages located mostly in Iringa region (Mafinga district) and sometimes in Kilimanjaro region, Arusha region (Arusha district and Meru district), and Tanga region (Lushoto district). Indigenous species of timber are bought from forest reserves, woodlands, and villages, and from a wider area than the softwoods. While the central government and local authorities regulate the distribution of softwood relatively well, there remains a lot of illegal trade because the supply chain of hardwood is more complex and has a large gray zone. Unlike softwood, which is openly displayed, hardwood is mainly delivered on demand. Hardwood is publicly displayed or transported only after conversion into furniture, so that official forestry office hammer marks indicating legality can no longer be checked (Shaafsma et al., 2014: 159). In their study investigating legal and illegal extraction in the Eastern Arc Mountains forests, Shaafsma et al. estimated that up to 90% of timber logging in this area is illegal. Dealers, sawyers, and carpenters have described various ways they circumvent regulations, for example by bribing village, district, and Tanzania Forest Services officials and policemen (Schaafsma et al., 2014).

According to Wells & Wall (2003), approximately one-third of the wood distributed in Tanzania was hardwood from the natural forest and two-thirds was softwood from commercial forest plantations established in the late 1990s. They note that ten years ago, a much higher percentage would have been hardwood, but in the past decade there has been substitution of hardwood by plantation softwood in Tanzanian towns, and this process is on-going (Wells & Wall 2003: 332). In the 2010s, it is speculated that the amount of hardwood distributed is further decreasing, although the illegal extraction of hardwood is continuing.

FURNITURE INDUSTRY IN ARUSHA AND USAGE OF INDIGENOUS TIMBER SPECIES

In this section, I describe the usage and price of timbers and business practices of furniture-makers. I interviewed 29 furniture-makers from 16 workshops and conducted an observational study in a workshop in Arusha city to investigate timber utilization, the furniture manufacturing process, and the impact of imported Chinese furniture on production and business management.

Table 3 is a list of informants. Most of the furniture-makers I interviewed were in the informal sector, and a workshop consisted of mostly 2 or 3 craftsmen and several apprentices and unskilled workers. When they receive an order for a lot of furniture, they hire temporary workers or ask acquaintance furniture-makers for help. Most of them started their business between 2000 and 2016.

Their workshops are located near wholesale timber shops or machinery workshops. In general, the process of furniture-making is as follows. Most small-scale informal furniture-makers typically purchase timber after taking an order from a customer, whereas larger-scale furniture-makers maintain stocks of raw materials.

Table 3. List of informants (furniture-makers)

No.	Zone	Nunber of craftsmen (Informants)	Business start year	Products
1	A	3 (2)	2014	All kinds of furniture
2	A	2 (1)	2008	Bed, Closet, Table, Chair, Cupboard, Desk
3	A	3 (2)	2009	Sofa and Bed (Chuma)
4	A	4 (2)	2000	Sofa and Bed (Chuma)
5	A	2 (1)	2016	Bed, Closet, Table, Chair, Cupboard, Desk
6	A	8 (4)	2014	All kinds of furniture
7	B	3 (1)	2011	Sofa and Bed
8	B	3 (2)	2007	Sofa
9	B	3 (2)	2009	All kinds of furniture
10	C	3 (1)	2005	Bed, Closet, Table, Chair, Cupboard, Desk
11	C	4 (2)	2014	Sourvenirs for tourists
12	D	4 (2)	2003	All kinds of furniture
13	D	2 (2)	2000	Bed and Sofa
14	E	3 (2)	2004	Bed and Sofa
15	E	4 (2)	2010	All kinds of furniture
16	Morombo	3 (1)	2002	All kinds of furniture

Source) Author's fieldwork.
Note) 1) The number of the craftsmen don't include several apprentices and temporary workers.
2) Some craftsmen have experience of manufacturing furniture in different places in the past. For example, No. 5 has a furniture-workshop in Moshi city before.

Small-scale informal furniture-makers take deposit from the customer and use it to purchase the timber. Because most furniture workshops don't possess their own band-saw and turning lathes to cut logs or planks, they take the timber to a nearby machinery workshop and carry the planks back to their workshops. Afterwards, they manufacture the furniture by flattening the surface of the planks with a plane, assembling the parts, carving, and then sanding the finished pieces. When the furniture is completed, customers come to the workshop and pay the remaining fee. Furniture-makers who have sufficient capital and have space to maintain stocks of raw materials, may manufacture furniture without taking orders, which they then display in open areas along the thoroughfares adjacent to their workshops.

Table 4 shows the cost of each species of timber suitable for furniture making. Generally, the timber most suitable for furniture-making is hardwood, but softwoods such as *Pine* (*Pinus patula*) and *Cypress* (*Cupressus lusitanica*) is also used for the base (drainboard) of beds (*Chaga za kitanda*) and the frames of sofas, and sometimes for the main parts of furniture.

The most popular timber used for furniture is a hardwood with a red-brown color called *Mninga* (*Pterocarpus angolensis*). *Mninga* is durable, does not absorb moisture, and is resistant to damage by insects, so that it can be used to produce any kind of furniture. The furniture-makers I interviewed stated that timber such

Table 4. The Species of timber using for furniture making

Local name	Scientific name	Size		Price (TZS)
		Inch	Foot	
Mvule	*Milicia excelsa*	not fixed (rare)		
Mpingo	*Dalbergia melanoxylon*	not fixed (rare)		
Mninga	*Pterocarpus angolensis*	6 × 2	7	40,000
Mkola	*Afzelia quanzensis*	6 × 2	7	40,000
Mpilipili	*Warburgia stuhlmanii*	6 × 2	7	35,000
Mkangazi	*Khaya anthotheca*	6 × 2	7	21,000
Kemfa	*Ocotea usambarensis*	6 × 2	7	21,000
Loliondo	*Olea europaea* subsp. *africana*	6 × 2	7	20,000
Mjakaranda	*Jacaranda mimosifolia*	6 × 2	7	15,500
Red Caliptus	*Eucalyptus*	6 × 2	7	12,600
White Caliptus	*Eucalyptus*	6 × 2	7	12,600
Mringaringa	*Cordia africana*	6 × 2	7	11,900
Mruka	*Albizia schimperiana*	6 × 2	7	11,200
Msesewe	*Rapanea rhododendroides*	6 × 2	7	10,500
Mluri	*Newtonia buehanani*	6 × 2	7	10,500
Mparachichi	*Persea americana*	6 × 2	7	9,800
Mtiki	*Tectona grandis*	4 × 4	8	35,000

Source) Author’s fieldwork.
Note) 1) The data collected from the interviewed with the timber dealers and the furniture makers.
2) This table compares the prices of species used for furniture-makers at the research period. There are other species that used for furniture-making.
3) I attempted to align the sizes of each species to compare the price, but I couldn’t find the same size of *Mtiki*.

as *Mpingo* (*Dalbergia melanoxylon*), *Mvule* (*Milicia excelsa*), *Mkola* (*Afzelia quanzensis*), *Loliondo* (*Olea europaea* subsp. *africana*), and *Kemfa* (*Ocotea usambarensis*) are also good materials with a broad range of utility for furniture making. However, in recent years these hardwoods have become relatively scarce due to destructive harvesting; therefore, their price has increased. *Mjakaranda* (*Jacaranda mimosifolia*) is relatively durable and it is readily available in cities in northern Tanzania, so many furniture-makers prefer to use this tree. White and Red *Caliptus* (*Eucalyptus*) have broad utility and their price is not so high, but the best quality of *Caliptus* for furniture making, called *Gamus* (“old tree”), is expensive. *Mringaringa* (*Cordia africana*), *Mruka* (*Albizia schimperiana*), and *Msesewe* (*Rapanea rhododendroides*) are commonly used for indoor furniture such as beds, cupboards, closets, tables, and chairs, but they are not suitable for entrance doors and window frames because they easily absorb moisture. These timbers are relatively inexpensive so most indoor furniture is made of these timbers. The price of timber is an essential factor determining the price of furniture.

Table 5 shows the manufacturing costs for a bed made of *Mjakaranda* and *Mringaringa*. A bed is made of five parts, as shown in Fig. 2 (see also Photo 3).

Table 5. The manufacturing cost of a bed of *Mjakaranda* and *Mringaringa*

Kinds of costs for manufactuaring a bed	Unit price (TZS)		Piece		Price (TZS)	
	Mj	Mr	Mj	Mr	Mj	Mr
Timbers (Size: in × in × ft)						
A (1 × 10 × 5)	12,500	8,500	4	4	50,000	34,000
B (1 × 10 × 5)	12,500	8,500	2	2	25,000	17,000
C (1 × 10 × 6)	15,000	10,200	2	2	30,000	20,400
D (1 × 10 × 6)	15,000	10,200	2	2	30,000	20,400
E (5 × 5 × 5)	12,500	8,500	2	2	25,000	17,000
Other Material						
Drainboard (*Chaga*)					30,000	30,000
Sanding paper (*Msasa*)					7,000	7,000
Nail					1,500	1,500
Glue (*Gundi ya moto*)					5,000	5,000
Paint and Vanishes					23,500	25,000
Job Commission						
Shaving (*Kuranda*)	500	500	12	12	6,000	6,000
Band-saw	500	500	12	12	6,000	6,000
Carving (*Kukereza miguu*)					5,000	5,000
Molding					6,000	6,000
Technical Fee (*Ufundi*)					30,000	30,000
Total					280,000	230,300

Source) Author's fieldwork.
Note) 1) The data collected from interview with a furniture-maker and participant observation at his workshop.
2) Mj is short for *Mjakaranda* and Mr is short for *Mringaringa*.

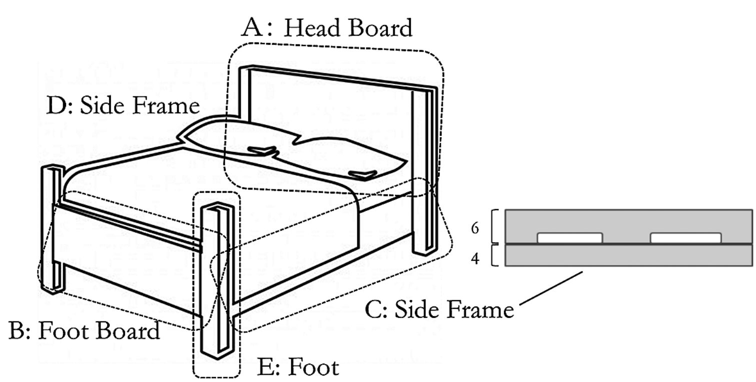

Fig. 2. The parts of a bed

The difference in the unit price of each timber is directly reflected in the production cost of the bed. It should be noted that when a furniture-maker uses low-cost timber, the price of the painting and varnishing will be high because they will try disguise the low-cost timber as *Mninga* by painting the wood a red-brown color so they can sell the bed at a higher price (see later in this section). This also applies also to other kinds of furniture; for example, the manufacturing cost of a cupboard made of *Mringaringa* is around TZS (Tanzanian shillings) 341,800 (US$1 = TZS 2,200) whereas one made of *Mjakaranda* is around TZS 436,000. However, if the furniture-maker uses *Mninga*, the furniture will be even more expensive. For example, the cost of an entrance door made of Red *Caliptus* is around TZS 127,900 and that of *Mninga* is around TZS 339,000.

Which species of timber furniture-makers use for each project is largely dependent on four factors. First is the work order; some customers order furniture made from a specific type of timber. Second is the customer's budget; even if a customer wishes to manufacture furniture with a specific species of timbers, if they do not have a sufficient budget, the furniture-makers recommend other type of timber with similar characteristics. Third is timber availability. Most furniture-makers tend to go to purchase timber at the nearest timber shop to reduce transportation costs and because they have built a semi-fixed transaction relationship with the shop's owner; however, the suppliers frequently do not have certain species of timber in stock. James Murphy mentioned that most furniture-makers in Mwanza city have built a relationship with their supplier to purchase materials on credit (Murphy, 2006: 1871–1872). This also applies to Arusha's furniture-makers. Fourth is the business management of the furniture-maker. If a customer does not designate a specific material and the budget is fixed, a furniture-maker will try to reduce costs by using cheap timber species. Most customers prefer furniture manufactured with red-brown timbers such as *Mninga*, *Mvule*, and *Mkola*; however, since the furniture-maker will paint or varnish the finished piece, they can make any kind of timber look like these more expensive timbers. Some furniture-makers decide to manufacture furniture when they obtain a certain kind of timber at an affordable price without first getting an order. Also, furniture-makers sometimes obtain or purchase timber recovered from demolished buildings, which they reuse for making furniture. For example, some hardwoods such as *Mninga*, *Mpingo*, and *Mvule* are becoming rare, but these timbers can sometimes be found when old government buildings are demolished. Therefore, furniture-makers are looking for reclaimable timber from which they can manufacture "vintage" furniture to sell to high-income customers at high prices.

Their business management is greatly affected by price competition with furniture made by other local furniture-makers and with imported furniture, especially from China. When customers plan to buy furniture, they tend to visit several furniture workshops and negotiate a suitable price, which means that a furniture-maker needs to manufacture pieces as cheaply as possible to prevent customers from going to other furniture workshops. At present, the import of Chinese furniture is increasing and price competition is becoming severe. In the next section, I will discuss the impact of imported Chinese furniture on the local furniture industry.

IMPACT OF CHINESE COMMODITIES ON THE LOCAL FURNITURE INDUSTRY

Most of Tanzania's imported furniture is made in China. According to the United Nations Comtrade Database for 2016, the amount of furniture imported from China was worth US$ 32,898,082, far beyond that from the second-largest imported country, South Africa (US$ 4,334,923). Figure 3 shows the change in the amount of furniture imported from China. The amount of furniture imported from China increased drastically from 2000 to 1014, but since 2015 it has decreased slightly. This decline may be a result of series of policies on the abolition of corruption and austerity enacted by President John Magufuli's regime since Oct. 2015 toward eliminating corruption at Dar es Salaam Port and ensuring strict collection of taxes on imported goods. Also, since the president declared during the election period to reform the tax system, it is conceivable that many importers reduced their activities until they could reassess the situation. Still, furniture made in China remains very popular in Tanzania.

The price range of imported furniture is very wide. In Arusha, several companies have large showrooms selling a range of furniture from affordable to high-end. The customers of these large companies are government institutes, hospitals, hotels, banks, schools, and relatively high-income customers, including foreign residents. There are also many small- and medium-sized shops dealing in furniture in the city center. In these shops, they sell imported furniture within almost the same price range, or even at a lower price range, compared with locally produced furniture. For example, a dining table and four chairs sold in a shop in Arusha city center is only TZS 180,000. This price is much lower than that for

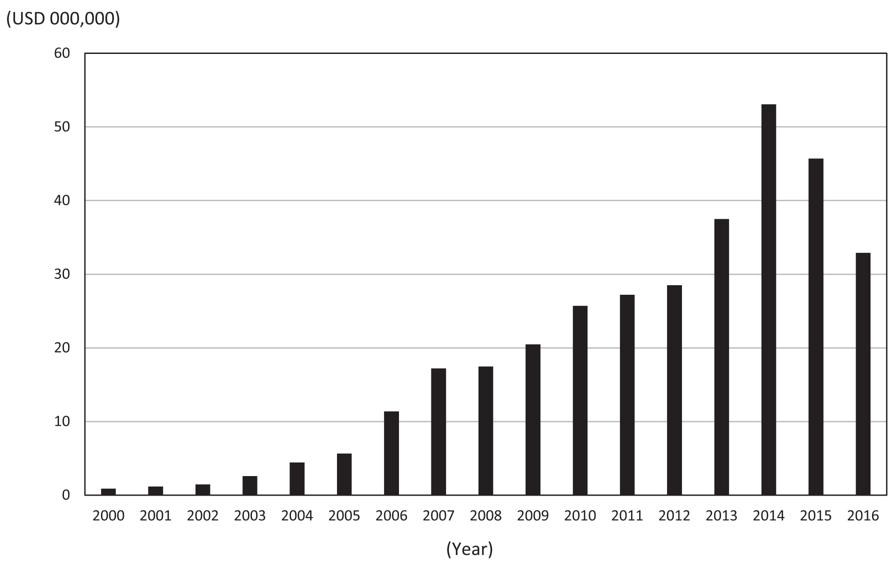

Fig. 3. The amounts of import of furniture from China (USD)
Source) UN Comtrade (https://comtrade.un.org/ cited 05/Aug./2017).

a locally produced dining-table set, which costs at least TZS 350,000. The price range of a metal bed is TZS 150,000–350,000, whereas the price range of a locally produced wooden bed is around TZS 200,000–550,000, depending on the materials. It is far more expensive for a customer to obtain a bed made of *Mninga* or *Mvule*. Locally produced beds made of iron are also expensive; the price of an iron bed is more than TZS 500,000 due to Arusha's unstable power supply and high electricity charge. Some furniture shops in Tanzania have recently opened online stores selling very cheap furniture made from various kinds of materials such as medium density fiberboard (MDF), aluminum, vinyl, and cloth. For example, a wardrobe made of aluminum pipe and vinyl cloth costs just TZS 50,000. According to an owner of a furniture store, such inexpensive wardrobes are gaining in market share, especially for low-income and single-person households.

Chanjarika (2013) reported in his research that most respondents (93.7%) stated that the price of locally produced furniture is higher than that of imported furniture. Urban residents of Arusha who came to the workshop where I conducted my observational study to order furniture also complained that locally produced furniture is more expensive compared with imported furniture. Indeed, in my interviews, furniture-makers lamented that few customers these days understand that good-quality furniture can only be made from good-quality hardwood:

> *Some customers insist that despite the price of imported furniture including transportation costs and customs duties, the reason why they are cheaper than the price of the furniture I sell is that I'm trying to deceive the customer to increase my profits. But the profits I earn by selling furniture is very low. Furniture produced in Tanzania is so expensive mainly because of the high price of hardwood* (18 Sep. 2014)

Schaafsma et al. (2014) pointed out that some furniture shops in Dar es Salaam switched from using high-class, expensive species of timber to low-class, inexpensive species of timber for furniture production due to the availability and increasing price of high-class timber. And some carpenters in Dar es Salaam reported that they are increasingly using softwood and low-class hardwood species to reduce costs and the prices of their products (Schaafsma et al. 2014: 164). Murphy (2013) clarified through his research on the furniture industry in Mwanza that while the general characteristics of the furniture sector have changed little, three major changes have occurred since 2000 with respect to products and the production system. The first is a dramatic increase in the use of MDF as a hardwood substitute because it can be painted and finished in ways that mimic the appearance of imported furnishings. Second, and related to the first, air compressors are now commonly used for spray painting these MDF furnishings. And third is the cost and availability of many high-value hardwoods, coupled with improvements in the ability to purchase artificial leather materials and other synthetic fabrics, have led to a significant rise in the production of sofas and chairs that have lots of cushioning. The inside frames for these furnishings are made from surplus or discarded wood from pallets, they are loaded with foam cushioning, and they are finished with plastic upholstery, small pieces of veneer, or spray-painted MDF (Murphy 2013: 1762). In my observations, furniture-makers in Arusha city also commonly use MDF, spray painting, and discarded wood, and there is even a large-scale fiberboard factory in the city.

Although a major way to cope with competition with cheap imported furniture is to change from expensive timber to relatively cheap timber and/or increase the use of other alternative materials, the success of such strategies are limited. One furniture-maker insisted the following:

> *Furniture that needed to be durable was made of indigenous hardwood called Mninga. However, because Mninga was becoming scarce due to destructive lumbering, furniture-makers started to make furniture with other kinds of hardwood, and to use paint to color the furniture the same red-brown color as Mninga. Consumers have the idea that good furniture is made of Mninga, so they can't sell the furniture at a higher price without painting it. Recently, cheap imported furniture made in China has rapidly spread in Tanzania. To my surprise, this imported furniture has the same red-brown color as Mninga. However, some furniture made in China is made of cheap softwood and plywood so it will break in less than a month. Consumers buy Chinese products because of their design. However, we can't use this approach because if we use painting technique, they will come to my workshop and claim that my skills as a craftsman are low; consumers can't go to China to complain.* (17 Sep. 2014)

As this furniture-maker stated, most of the furniture-makers in Arusha City paint their furniture a red-brown or dark-brown color to make it look like high-quality wood. However, some furniture-makers regard painting as "craftsman's technique" to make furniture beautiful and do not consider painting as subterfuge because they often tell the customers the type of timber they used, although some furniture-makers are not so honest and they tell the customer the that wood is *Mninga* when it is not or that they are getting a high-quality piece of furniture at a cheap price.

It is thought that furniture made in China has the same color as *Mninga* partly because Tanzanian traders who travel to China purchase goods that match the Tanzanian popular aesthetic (Photo 4). From the beginning of this century, traders conducting informal or semi-informal transnational business between China and African countries has increased drastically, and some scholars have called this phenomenon "globalization from below" and "non-hegemonic world system" (Mathews et al., 2012).

What is important here is that since Tanzanian furniture-makers build a face-to-face relationship with their customers, alternative timbers for their furniture manufacturing are becoming more and more limited than they are in China. Some customers request furniture-makers to manufacture furniture at the lowest price they can. However, even in such cases, most honest furniture-makers tend to explain that they need to consider durability and they recommend not using softwood or cheap hardwood. Also, even if a customer's budget is insufficient, they often recommend other suitable types of timber. For example, in a case I observed, a furniture-maker produced a bed by using softwood for the headboard and footboard but hardwood for the side-frames and feet of the bed, which are the parts that need durability, and he then painted the whole bed the same color. Also, this furniture-maker uses plywood for partitions and backboards, but he uses hardwood for other parts. Similarly, another furniture-maker stated that:

> *Sofas made in China have wonderful designs and they are mostly cheaper than our products. However, if you remove the cloth and cushion and check inside, you will know the origin of the product. Nowadays, we also use softwood and plywood for the frame of a sofa when durability is not required, but we always use hardwood, even if it is reclaimed material, or other relatively good materials, when durability is required. Chinese people think differently. They use good material for the visible parts and bad material for the invisible parts. Since nobody will cut the cloth and check inside when they buy a sofa, they don't notice the difference until they use the product. I am a craftsman selling furniture I build myself. When a customer orders a sofa, they trust my skill and honesty based on my craftsmanship, so I can't deceive the customer by selling a bad product as a good product. In contrast, when customers purchase furniture made in China, they trust their own eyes. They don't trust the seller because the sellers are not craftsmen; instead, they are cunning merchants thinking only of their own profit. That is a big difference* (16 Sep. 2014).

Thus, since the business of informal sectors traditionally relies on face-to-face negotiation with customers, even if they use an alternative timber, its use is restricted by the limits of the relationship of trust they have with their customers, and in a broader sense, by the network of reputation that is spread by word of mouth (cf. Fafchamps 1996; Murphy 2002).

On the other hand, there are opinions that are in favor of the influx of imported Chinese furniture. A furniture-maker stated as follows:

> *The biggest problem in our business is the lack of capital to buy machinery and an indoor showroom. The next important issue is that design ideas are easily stolen by other furniture-makers. Many furniture-makers in our country obtain ideas for furniture by imitating the design of other furniture-makers, instead of by acquiring knowledge and skills at a school. That means that even if you come up with an idea for a popular design, after a while, as everyone imitates it, you will not be able to sell it at the same price as before. Nowadays, we can download images and catalogs of furniture made in China through the Internet, and we can acquire an abundance of ideas for new designs without much concern about other furniture-makers, which relaxes the potential competition among us local furniture-makers* (14 Sep. 2014).

Most furniture-makers in Arusha city agreed that copying or stealing the designs of other furniture-makers is inevitable as long as they continue to display their furniture on the street or in factory gardens. However, they are sensitive about the leaking the price of furniture to other furniture-makers. When I asked a furniture-maker to take me to Maravian Sakina street where various kinds of furniture are displayed in order to research the average price of locally produced furniture sold in Arusha city, he told me that he will investigate the price on my behalf. According to him, the furniture-makers will not tell me the true retail price because they would assume that I was a Chinese, rather than Japanese, furniture-seller who was trying to steal local designs or to determine whether they steal the designs of Chinese companies. At that time, I had already obtained price lists for furniture from several informants and they sometimes allowed me to stay at their workshops to observe their negotiations with customers, so I thought his worry was unfounded. However, the next day, the furniture-maker went to the street to check the price wearing Muslim formal dress accompanied by a woman, and he told me that even local people cannot obtain information on retail prices without pretending to be a rich customer:

> *If they find a nice design on the street, the furniture-makers will try to imitate it. Even if you take a glance at it on the street, you can find a similar design later by checking the furniture catalogs and the internet. As a result, all furniture-makers sell furniture of similar designs. However, even though the designs are similar, the selling prices may not be similar. Because the prices of the products differ depending on what kind of materials they use, how they obtain the materials, and what kind of efforts they make that the customer may never know, for example, their discount relationship with the timber dealer, and selling furniture at affordable price by getting extra sales by selling niche items such as chicken coops ... but, it is important to keep in mind that the possibility that the customer will come back again or will introduce their friends to you will not increase by selling furniture at a cheaper price…customers only become repeat customers when they are satisfied with the balance between the price and quality of the furniture* (26 Aug. 2015).

In a recent paper discussing the substantial effect of ICT development on Tanzania's small- and medium-scale enterprises, Murphy negatively evaluated the strategies of copying the design of imported furniture gained through the Internet from the viewpoint of creativity (Murphy, 2013). In the present paper, however, I consider the practices of copying from another angle.

One of the main strategies of sofa manufacturers to reduce costs is to change the material of the elbow rest from wooden handles to cushions, imitating the modern design of furniture made in China. In the past, Arusha's furniture-makers used hardwood for the elbow rest, feet, and frame, as they did for other furniture such as beds and coffee tables (Photos 5 & 6). Nowadays, modern sofa designs using cushions are popular and furniture-makers manufacture sofas without using hardwood because they can reinforce the softwood with cushions. A furniture-maker explained the change brought by this strategy:

Many furniture shops in Arusha City no longer sell sofas (couch sets) and high-class furniture because we made copies of these Chinese sofas and high-class furniture. Our price was not always lower than that of sofas made in China; however, the furniture made in China is not made honestly. Our techniques to reduce the costs of manufacture and selling are more innocent and can be forgiven by the customer as survival strategies. In fact, our copies are usually better than the original in terms of quality. Chinese people are unable to sell the furniture that we can produce with materials that can be obtained at an affordable price (25 Aug. 2015).

What is an interesting here is that the constraint of changing timber from expensive hardwood to softwood or alternative materials sometimes turns out to be a business strategy for competing with imported Chinese furniture by emphasizing "trust" and "honesty". In fact, many traders importing furniture from China told me that it is becoming difficult to make a profit by importing high-class furniture that is made of high-quality materials because the local furniture-makers have copied them using local materials at affordable prices, which has force traders try to find cheaper and cheaper Chinese furniture.

CONCLUSION

Here, I examined the impact of Chinese furniture on the small- and micro-scale furniture industry in Arusha city by focusing on the availability of indigenous timber and the strategies of businesses in this industry for using timber. Certain indigenous species of timber suitable for furniture-making have become scarce and the price of that timber is increasing. The main strategy of furniture-makers who face price competition from imported Chinese furniture is to reduce costs by using alternative species of timber; however, this strategy has limited results. They can't switch from expensive, high-quality timbers to cheap, low-quality timbers freely because they must run their business based on a face-visible relationship with their customers.

Chinese furniture (and ICT) has opened a new way for local furniture-makers to obtain numerous design ideas and to make copies of Chinese products. One result of this is that local furniture-makers can compete or exclude high-class Chinese furniture from the local market by copying their designs but using better materials; however, this also means that they further promote the influx of cheap, low-quality Chinese furniture.

If inexpensive, low-end furniture dominates the Tanzanian market, what kinds of strategies remain for furniture-makers? At first glance, there are two options. First, reflecting the intensification of price competition with furniture made in China, manufacturing inexpensive furniture using lower-cost, lower-quality materials or alternative materials such as MDF, vinyl chloride, aluminum pipe is one option. Alternatively, they could incorporate the design of furniture made in China but increase their competitiveness by maintaining quality through the selection of good quality hardwood. For this informal economy, which relies on a reputation network solidified and expanded through the face-to-face negotiation, the former option of using lower-cost or alternative materials is likely the more difficult option. However, the latter option of incorporating the design of imported furniture but using better materials is also difficult due to the decreasing availability of high-quality hardwoods and low-price-oriented consumer behavior. This, therefore, is the dilemma faced by the local furniture industry in Tanzania under the influx of furniture made in China. One way to overcome this dilemma, as Murphy (2013) points out, may be the creation of original design products rather than of copies of Chinese furniture. However, there may also be a more nuanced option between the low-quality materials versus high-quality materials dilemma, which is the option of using softwoods and alternative materials.

Previously, I investigated consumer behavior regarding low-priced copies of products made in China (Ogawa, 2016). At that time, a common refrain among Tanzanian consumers was that original products made in Japan can be used for five years but the price is also five times that of the Chinese copies; Chinese copies are very cheap but they can only be used for a year; so why are there were no affordable products, twice the price of the Chinese copies, that will last for least two years. Similarly, the constraints of strategies such as selling furniture by painting cheaper hardwood to look like *Mninga*, but not selling furniture made from softwood by pretending it is *Mninga*, might be a rational strategy to address the balance expected by local consumers between price and quality through face-to-face negotiations. Of course, striking a balance between price and quality for consumers may be an unstable strategy that is affected by changes in the price and quality of Chinese furniture; however, it seems to me that one possibility for the development of the local furniture industry depends on how best to the furniture-makers can leverage their face-to-face relationships with local consumers as a major strength.

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Photo 1. Timber yard dealer in Arusha city (Aug./2014)

Photo 2. Timbers sold in Arusha city (Aug./2014)

Photo 3. Beds manufactured by the local-furniture-makers in Arusha (Aug./2014)

Photo 4. Furnitures and other commodities purchased in Guangzhou city, China (Feb./2017)

Photo 5. Sofa made of *Mninga* (picture obtained from a funiture-maker in Arusha)

Photo 6. Inside of a Sofa (picture obtained from a funiture-maker in Arusha)